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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/675,165	09/29/2000	Naoji Otsuka	35.C14829	2801

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EXAMINER

NGUYEN, THINH H

ART UNIT	PAPER NUMBER
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2861

DATE MAILED: 11/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/675,165

Applicant(s)

OTSUKA ET AL.

Examiner

Thinh H Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 10.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 9-17, 20, 22, and 24 rejected under 35 U.S.C. 102(b) as being anticipated by Lin et al. (U.S.4,748,453)

Lin et al. (see fig.1, claims 1, 7, and 8) discloses every element of the instant claimed print apparatus includes printing wherein ink nozzles of respective colors are arranged and delivered in a symmetrical ejection order in the forward and reverse directions so that to eliminate a hue difference.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al.

Lin et al. discloses the instant claimed method of printing by applying ink in symmetrical order in the forward and reverse direction except for a data buffer.

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However, it would be well known in the printer art to utilize the buffer (i.e., RAM) to store processed information and improve printer processing time. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the data buffer in Lin et al. to enhance printing performance and for storing processed information.

5. Claims 6-8, 18-19, 21, 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al. in view of prior art of record to Matsufuji et al. (U.S. 4,593,295)

Lin et al. discloses the instant claimed nozzle structure except for nozzle groups of certain color are symmetrically arranged in a scanning direction.

Matsufuji et al. teaches nozzle groups of certain color are symmetrically arranged in a scanning direction and printing are applied in the symmetrical order. Since both Lin et al. and Matsufuji et al. related to controlling nozzles ejection order in the bi-directional printer, it would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt the Matsufuji et al. nozzle structure in Lin et al. for the purpose of ejecting ink color in the symmetrical order.

As for limitation recited in claims 18 and 19, Lin et al. does not teaches applying the apparatus in a copy machine and a facsimile machine.

However, it would be obvious to use the apparatus such as the ink jet printhead as taught by Iwazawa in the copy machine and the facsimile machine since it is widely

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known to apply ink jet structure as a whole in the copy machine and the facsimile machine so that ink jet application can be provided.

Contact Information

Any inquiry concerning this communication should be directed to Examiner Thinh Nguyen at telephone number (703) 308-7487.

Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 308-0956.



Thinh Nguyen

November 14, 2002

Thinh Nguyen
Primary Examiner
Technology Center 2899